AMENDMENT

In the claims

Please amend claim 108 as provided below in the complete listing of the claims.

1-107 (cancelled)

108 (currently amended). An automated process for depositing a defined amount of 3-hydroxypicolinic acid matrix for matrix-assisted laser-desorption ionization (MALDI) mass spectrometric analysis at a plurality of discrete locations on the surface of a substrate, which comprises

depositing a defined and controlled 0.2 to 20 nanoliter volume of a solution comprising the matrix, a solvent and no analyte at a plurality of discrete locations on the surface of a substrate by an automated dispenser, and

allowing the solvent to evaporate thereby forming an array of spots on the surface of the substrate consisting essentially of matrix.

109 (previously presented). The automated process of claim 108, wherein the automated dispenser comprises a vesicle having a chamber and a transducer element for ejecting fluid from the chamber.

110 (previously presented). The automated process of claim 109, wherein the transducer element is selected from the group consisting of piezoelectric, electric, electrorestrictive, magnetorestrictive, electromechanical transducers and the like.

111 (previously presented). The automated process of claim 109, wherein the transducer element is a piezoelectric transducer.

112 (previously presented). The automated process of claim 108, wherein the automated dispenser deposits the solution without touching the surface of the substrate.

113 (previously presented). The automated process of claim 108, wherein the automated dispenser comprises a vesicle that comprises an interior chamber suitable for carrying a solution.

114 (previously presented). The automated process of claim 108, wherein the automated dispenser comprises a vesicle that comprises a pin having a chamber of sufficient narrow bore to allow the chamber to at least partially fill with a solution by capillary action.

115 (previously presented). The automated process of claim 108, wherein the automated dispenser deposits the solution by contacting the surface of the substrate.

116 (previously presented). The automated process of claim 108, wherein the automated dispenser comprises a vesicle that comprises a solid shaft of material.

117 (previously presented). The automated process of claim 108, wherein the automated dispenser comprises a vesicle that is rastered over the surface of the substrate.

118 (previously presented). The automated process of claim 108, wherein the automated dispenser comprises a plurality of vesicles in an array.

119 (previously presented). The automated process of claim 108, wherein the matrix is 3-hydroxypicolinic acid.

120 (previously presented). The automated process of claim 108, wherein the solution comprises CH_3CN.

121 (previously presented). The automated process of claim 108, wherein the solution comprises 50% CH_3CN.

122 (previously presented). The automated process of claim 108, wherein the substrate comprises material selected from the group consisting of silica, glass, cellulose, silicon, metal, plastic, polymer and metal-grafted polymer.

123 (previously presented). The automated process of claim 108, wherein the substrate comprises a flat surface, a flat surface with pits, a solid or porous bead, a membrane or a pin.

124 (previously presented). The automated process of claim 108, wherein the substrate comprises silicon.

125 (previously presented). The automated process of claim 108, wherein the substrate comprises a metal.

126 (previously presented). The automated process of claim 108, wherein the substrate comprises a plastic.

127 (previously presented). The automated process of claim 108, wherein the substrate comprises a membrane.

128 (previously presented). The automated process of claim 108, wherein the substrate comprises a metal-grafted polymer.

129 (previously presented). The automated process of claim 108, wherein the substrate is chemically functionalized.

130 (previously presented). The automated process of claim 108, wherein the substrate is chemically functionalized with beads.

131 (previously presented). The automated process of claim 108, wherein the substrate is chemically functionalized with a dendritic material.

132 (previously presented). The automated process of claim 108, wherein the solution consists essentially of the matrix and the solvent.

133 (previously presented). The automated process of claim 108, wherein the solution consists of the matrix and the solvent.

134 (previously presented). The automated process of claim 108, wherein the spot is a flat disk.

135 (previously presented). The automated process of claim 108, which further comprises depositing a defined and controlled volume of another solution comprising an analyte on spots of the array.

136 (previously presented). The automated process of claim 135, wherein the solution comprising the analyte dissolves the matrix.

137 (previously presented). The automated process of claim 135, wherein the matrix and analyte form crystals.

138 (previously presented). The automated process of claim 135, wherein an analyte is a nucleic acid.

139 (previously presented). The automated process of claim 108, wherein the volume is reproducible at the discrete locations.

140 (previously presented). The automated process of claim 108, wherein the amount of matrix is reproducible from spot to spot.

141 (previously presented). The automated process of claim 135, which further comprises obtaining MALDI mass spectra directly from the spots in the array, wherein the MALDI mass spectra are reproducible.

142 (previously presented). The automated process of claim 141, wherein the MADLI mass spectra are reproducible with a relative standard deviation of about 0.1%.

143 (previously presented). The automated process of claim 108, which further comprises obtaining MALDI mass spectra directly from the spots in the array, wherein the MALDI mass spectra are reproducible if a defined amount of a nucleic acid analyte is deposited on the spots.

144 (previously presented). The automated process of claim 108, wherein the spot size is defined by 800 micrometers by 800 micrometers or less.

145 (previously presented). The automated process of claim 108, wherein the spot size is defined by 450 micrometers by 450 micrometers or less.

146 (previously presented). The automated process of claim 108, wherein each spot in the array consists of matrix.